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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09:941,168	08/28/2001	David B. Shaw	5628-06600	4655

7590 07/07/2003

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EXAMINER

SAMPLE, DAVID R

ART UNIT	PAPER NUMBER
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1755

DATE MAILED: 07/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

AS-7

Office Action Summary

Application No.

09/941,168

Applicant(s)

SHAW ET AL.

Examiner

David Sample

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 December 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>5,6</u> . | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Unless a material is Newtonian in nature, the material's viscosity will depend upon shear rate. See Figure 3, page 151 of Fischer, Rheological Properties of Dispersion, 1950 (applicants' ref. designation A221). Layered smectite clays having a composition similar to the presently claimed invention has a viscosity that changes with shear rate (i.e., rpm). See, for example, US 4,040,974, col. 20, Table 5A.

The present claims describe that the inventive layered silicate causes an aqueous medium to have a viscosity of greater than 200,000 centipoise, however, the claims fail to describe the shear rate employed to measure the viscosity. One of ordinary skill in the art cannot determine the scope of the subject matter sought to be patented without knowing the shear rate associated with the measurement of the viscosity.

Claims 3-17 and 19-33 are rejected for failing to correct the deficiencies of the claims from which they depend.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-33 are rejected under 35 U.S.C. 102(e) as being anticipated by Bauer et al. (US Patent No. 6,274,111 B).

Bauer et al. discloses a synthetic magnesium silicate, which has a composition containing ranges of components that are sufficiently specific to anticipate the composition recited in the formula of instant claim 1. See col. 3, lines 1-5 of the reference and MPEP 2131.03. Moreover, Example 3 of Bauer et al. has a lithium content of 0.48 wt% and a SiO₂/MgO weight ratio of 2.15, and Example 5 has a lithium content of 0.54 wt% and a SiO₂/MgO weight ratio of 2.16.¹ See col. 9, lines 60-62, and col. 11, lines 12-13. The lithium content anticipates the instant claim 1 recitation and the SiO₂/MgO ratio anticipates the claimed SiO₂/MgO in view of the latitude in interpreting the word 'about' in claims.

The material of Bauer et al. is made in a manner that is identical to the presently claimed method. In particular, a magnesium compound is mixed with a carbonate compound that is in a solution with a silicon source and a monovalent cation source. See Examples 1, 3 and 5, col's 8-11.

¹ The SiO₂/MgO weight ratio described in the rejection was calculated from the reference's disclosure of Si and Mg contents, i.e., multiplying the Si/Mg ratio by the quantity (60.1/28.1)/(40.3/24.3).

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The recitations of 3-16 and 18-33 can be found in the reference in Examples 1, 3, and 5, col's 8-11.

The reference fails to disclose the viscosity characteristics of instant claims 1, 2 and 18. As described above, the material of Bauer et al. is identical to the presently claimed material and is made in an identical manner. Therefore, the presently claimed viscosity characteristics are assumed to be inherent to the layered silicate of Bauer et al. See MPEP 2112.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Sample whose telephone number is (703)308-3825. The examiner can normally be reached on Monday to Thursday and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Bell can be reached on (703)308-3823. The fax phone numbers for the organization where this application or proceeding is assigned are (703)872-9310 for regular communications and (703)872-9311 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0661.

A handwritten signature in black ink, appearing to read "David Sample", written in a cursive style.

David Sample
Primary Examiner
Art Unit 1755

DRS
June 30, 2003